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3 November 1965

MEMORANDUM FOR: Deputy Director for Intelligence

THROUGH : Director of Current Intelligence

SUBJECT : CIA Assessment of the Chinese Communist Threat as Projected in the Army's Nike-X Deployment Study and DIA's Special Intelligence Supplement, "Communist China, Nuclear Threat"

**\*DOE Review Completed\***

1. On 13 October, the Director of Central Intelligence requested a joint DDI-DDS&T assessment of the two referenced studies with particular emphasis on projections of the Chinese Communist threat to the US through 1985. The report of the joint task group assigned to prepare this assessment is attached.

2. In general, the group believes both studies underestimate the economic and technological limitations facing China through the next two decades and concludes that the Chinese will not be capable of producing all the weapons systems projected. It is our view that the Chinese initially will direct more of their effort and resources toward improving their military position in Asia and less on developing a US-oriented strategic deterrent. Thus neither study can be used by the intelligence community as a point of reference for measuring the future Chinese threat.

3. We agree with the two studies that by 1976 the Chinese probably will have no more than half a dozen ICBMs deployed. In the interim, both papers state, the diesel G-class ballistic missile submarine will represent the primary Chinese nuclear delivery capability against the United States. Because of range limitations, we do not believe the G-class boat represents a significant threat to the continental US. It is a potential threat to Hawaii and Alaska and, more importantly, to US bases and allied nations in the western Pacific.

4. The Nike-X Deployment Study is considerably more extensive than the DIA paper and, in recommending a deployment of the Nike-X system against the projected threat, examines several subjects not covered by DIA. One of these is world reaction to a Nike-X deployment. On this score, we believe the study overstates the favorable aspects by a rather considerable margin. It suggests among other things, that deployment of Nike-X would tend to curb nuclear proliferation and reassure US allies in Asia. It is our feeling that Nike-X deployment would probably have little effect on the desire of other nations to join the nuclear club and that deployment of an "anti-Chinese" defensive system in the US would tend to upgrade the Chinese threat in Asian eyes rather than to reassure friendly Asians.

**\*ARMY and DIA review(s) completed.****SECRET**

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5. Another subject covered by the Nike-X Study (but not by DIA) is intelligence lead-time. The study estimates that through the next ten years the US would have only two to three years lead-time after detection of a Chinese weapon before its deployment in the field. For some systems--new submarine classes, for instance--this time frame appears to be about right. However, we believe we would have better than four years lead-time on a Chinese ICBM program because of the time required to construct a rangehead and our capabilities for detecting such construction. We also believe that the pace and nature of the Chinese nuclear test program will provide important clues on weapons system developments considerably in advance of actual deployment.



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Chief, Military Division

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CIA ASSESSMENT OF THE NIKE-X DEPLOYMENT STUDY  
AND DIA SPECIAL INTELLIGENCE SUPPLEMENT  
ON COMMUNIST CHINA, NUCLEAR WEAPONS  
THREAT

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(NOTE: All mileages in this paper are nautical miles)

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I  
INTRODUCTION

By memorandum of 9 July 1965, the Secretary of Defense directed the Department of the Army to prepare a report covering the type of Nike-X deployment that would be recommended for defense against attack by countries other than the Soviet Union. Communist China was considered the most likely source for such an attack and the Army's report was to place special emphasis on defense recommendations matched against the projected Chinese strategic threat through 1985. This study, dated 1 October, was done under Army contract by the Stanford Research Institute (SRI). The document is entitled Nike-X Deployment Study.

The Secretary of Defense also directed the Defense Intelligence Agency to prepare an estimate of the Chinese threat through the same time period. This document is entitled DIA Special Intelligence Supplement, Communist China Nuclear Weapons Threat.

On 13 October the Director of Central Intelligence asked that the Chinese threat projections contained in these two documents be assessed by the Deputy Director/Intelligence and the Deputy Director/Science and Technology. The following report is that assessment prepared by a joint task force.

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II  
GENERAL COMMENTS

A fundamental point in considering how Chinese military capabilities might evolve over the next decade or two is the shortage of solid evidence on which to base intelligence projections. This is only partially due to deficiencies of intelligence collection and analysis. The principal reason is that China's short and disjointed experience in attempting to produce modern weapons does not provide--as does the record of the Soviets--reasonably clear indication of the ways in which the regime's military thinking has been evolving, the probable nature of force goals, and its ability to develop and produce sophisticated hardware.

We know that the Chinese undertook to produce, with Soviet help, a rounded sampling of the advanced weapons available in the late 1950's, including jet aircraft, surface-to-surface and surface-to-air missiles, a missile-armed diesel submarine, and atomic weapons. We can infer but not prove that the Chinese, in undertaking the program, expected that it would eventually result in their acquisition of nuclear submarines and ICBMs. We know that the Chinese, despite the disruptions and difficulties posed by the withdrawal of virtually all Soviet aid and the collapse

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of the Great Leap Forward, have slowly but doggedly gone ahead with production of their first nuclear devices and with work on other key programs, and we can presume that they still aspire to an eventual capability to threaten the US itself with ICBMs, nuclear submarines, or both.

However, we have only the most fragmentary evidential basis for judging how many--or which--of the weapons now under development they may decide would be feasible to deploy and we must rely primarily on our sense of likely requirements and capabilities to project the kinds and numbers of more advanced hardware they might seek to develop.

The extent to which China's relatively narrow scientific and technological manpower base can be depended on to design items not provided by the USSR, and translate scientific knowledge into actual hardware, is particularly hard to assess. For all their success in developing and testing two nuclear devices (on the basis of greater or lesser help from the Soviets) the Chinese have not as yet demonstrated significant independent progress in other aspects of modern weapon technology. Finally, there are too many uncertainties about the actual state of the Chi-

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nese economy in the wake of the Great Leap Forward and too few even moderately reliable statistics to make qualified economic projections of any precision.

This does not preclude any and all efforts to project how Chinese military capabilities might evolve. It does mean that such projections will be more than normally dependent on the projectors' own assumptions and pre-conceptions about: (a) how the Chinese leadership (both now and in the post-Mao era) expects to use military power; (b) how that regime will wish to allocate its scarce resources to various specific military and non-military uses; and (c) how much the basic calculations of the time required to develop and produce various specific kinds of military hardware should be scaled down to take account of China's economic and technological weaknesses and the intense competition for scarce resources and skilled manpower.

The SRI study goes through elaborate efforts to subject its projections to quantitative and purportedly objective tests, working up detailed projections of GNP ranges, the levels of military expenditures which the economy might support, and the costs of given weapons systems. In the end it comes

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up with conclusions which might also have been reached less formally and which we consider to be too optimistic.

The DIA memorandum, in contrast, appears to have been put together in a more simplified fashion, placing primary reliance on trying to project how soon individual weapon systems might be developed without specific quantitative adjustments to take account of the economic and technological constraints and the competition for scarce resources.

However, the two projections are generally comparable varying principally in the somewhat differing military hardware shopping lists postulated for the Chinese, and with DIA's projections generally higher than SRI's. Both studies postulate a wider variety of weapons systems than we think the Chinese are capable of supporting, particularly in the light of the expenditures which must be made for ground force, air defense, and other requirements.

Given these inherent limitations and making allowance for the questions which can be raised about various specific items on technical grounds, the SRI and DIA papers, taken together, do a useful job of illustrating the general dimensions which a maximum military threat to the US might assume over the next decade or so--particularly in view of the size of the

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task. Both postulate a determined enemy intent on developing a wide range of modern weaponry as rapidly as can be managed under China's economic circumstances; both project a variety of nuclear weapons and delivery systems for the 1985 period.

In particular, both studies estimate that the only way the Chinese could threaten the US itself over the most of the next ten years is with small numbers of the G-class submarine, which normally carries three ballistic missiles of only 350-mile range, would have to be refueled in transit across the Pacific, and would be relatively vulnerable to US surveillance and pre-emptive action. We do not believe the G-class submarine represents a significant threat to the US West Coast. The studies are probably correct in their judgments that while the Chinese could succeed in developing an ICBM by the 1972-1975 period, they would probably not have more than about half a dozen deployed by 1976. These, like the submarine missiles, would represent too small a number for rational first strike and would be vulnerable to pre-emption.

A major difficulty is that both the SRI and DIA projections cover only part of the spectrum of possibility, even if we exclude as outside the problem

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the possibility of further serious economic setbacks. Both studies, after acknowledging the principles of Maoism, tend to consider the Chinese as though they were US or Soviet military planners intent on developing a maximum long-range strategic capability. This is a useful way of developing a maximum threat but it is not necessarily the way the Chinese will act. They may be satisfied, not with token numbers, but with far fewer long-range attack weapons than they are credited with possessing, particularly by the end of the second decade.

The Chinese are probably far more narrowly focused on Asia itself than the SRI study suggests--far more concerned with action on the spot to weaken the US military presence and restore Chinese authority over their own airspace and surrounding lands and waters than with development of long-range strike capabilities. In this connection, when DIA stresses the Asia-oriented aspects of the Chinese program, it is probably closer to the mark than SRI.

Finally, the validity of any projections for the 1975-1985 period is subject to further uncertainties. The SRI study in particular does an heroic job of trying to consider the various kinds of weapon systems and components the Chinese might wish to develop in the next fifth of a century. What emerges serves to illustrate what might be developed but it still represents an attempt to project the weapons

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of 20 years hence in terms of today's (and often yesterday's) technology, taking no account of how differently military imperatives and requirements might appear to the Chinese in the light of new political, economic, and military-technological conditions of 10-20 years hence.

Perhaps the most striking conclusion that must be drawn from the two papers--though one not reached explicitly by them--is that the Chinese in 20 years' time may have caught up with 1965 US and Soviet technology but they probably will still be at least 20 years behind the technology of 1985.

It should be noted, however, that this level of technology would probably be quite adequate for Chinese military purposes in Asia and, by the end of the period, might still enable them to pose a significant threat to the US.

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III-A  
COMMENTS ON CHINESE ECONOMIC AND TECHNICAL CAPABILITIES

The SRI economic analysis is commendable for the breadth of its considerations, but it unfortunately falls short in its execution. Although it discusses the lack of data on China and remarks on the uncertainties and difficulties of making economic projections, it goes on to construct economic models in great detail thereby conveying a sense of thoroughness, exactitude and definitiveness that, in our opinion, is misleading.

We were unable to reconstruct completely the methodology SRI used in making its projections of gross national product (GNP). However, insofar as we were able to follow it, we believe that there will be fewer resources available for military purposes than indicated in the SRI study.

Basically, the analytical technique used by SRI was to make assumptions as to the portion of total output of the economy required for consumption and to postulate the portion of total output that would be used for investment in the general economy (as distinct from investment in the military sector). Then assumptions were made as to the rate of economic growth that would be engendered by this investment.

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The portion of total output that remained after allowances for consumption and non-military investment was presumed to be available for allocation to military purposes. By varying the magnitude of the elements of the equation, a range of GNP projections and a range of levels of military expenditures which the economy might support were derived.

We believe that SRI makes insufficient allowance for consumption requirements, especially in the first decade, and underestimates the level of non-military investment that would be required to maintain GNP growth rates projected for the second decade. If we are correct, the larger amount of resources required for consumption and non-military investment would, perforce, reduce the amount available for military purposes.

Our disagreement with SRI on this point is crucial and becomes even more so in the light of the following quotation from the SRI study.

"Three threat estimates, High, Median, and Low, have been made and costed in another portion of this study. It is found here in (i.e., in the economic analysis section) that the High threat is economically infeasible. The Median threat is, for part of the time period, only marginally feasible. Only the Low threat is clearly feasible--if the higher economic projections prove correct--and it is only partially feasible if the lower economic projections eventuate." (underlining provided)

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We should also like to point out that this extremely important caveat is largely ignored elsewhere in the study, yet it is the "median threat" that is projected and on which Nike-X deployment recommendations are based.

Economic aggregates, such as projections of GNP and the uses to which it is put, provide only a first approximation of a country's capabilities to support military programs, even in countries where the estimates can be made with a reasonable degree of precision. Thus, beyond the constraint to military programs imposed by the total resources that can be diverted from civilian uses, there is perhaps a greater constraint in terms of the supply of the scarcest of these resources: namely, the highly skilled scientists and engineers and the wherewithal to produce special materials.

Another great problem in assessing Chinese capabilities for developing and producing complex weapons is the disjointed history of their efforts in this field. All of the major weapon systems the Chinese have produced to date are Soviet models produced in facilities that were supplied in whole or in part by the Soviet Union before aid was cut off in 1960.

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Common sense tells us that the Chinese will encounter more and more difficulties as they forge ahead on their own, but how much these difficulties will delay their efforts defies measuring.

Although we believe that SRI's "feasible range" of military programs is generally too high, it is difficult to rule out, on an individual basis, any of the specific weapons programs which have been postulated. Obviously, by concentrating on one or two weapons systems the Chinese could improve their chances of earlier success. Thus, much will depend on Peiping's set of priorities, and we have only the most fragmentary evidential base for judging what current priorities are, much less what they will be in the future.

DIA does not present an economic analysis. It merely states:

"The projected weapons development program would impose a severe strain on the economy of the country and would involve, directly or indirectly, a disproportionate amount of China's total research and development resources. It is anticipated, however, that because Communist China's leaders consider the development of an independent nuclear capability a matter of prime importance, such a program, developed step by step, will receive top priority in their long range national planning, even at the expense of the development of other factors of major national interest."

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III-B  
COMMENTS ON WEAPONS SYSTEMS PROJECTIONS

- Note -

In this section we comment on SRI's and DIA's projections individually. When we say a certain projection is "reasonable," we mean that we can see no overriding technical or economic reason why the Chinese could not develop a weapons system something like that which is projected. We do not mean to imply that we agree that the entire packages as projected by DIA and SRI are feasible. (See our comments on pages 9-12, "Comments on Chinese Economic and Technical Capabilities.")

1. Submarine Missile Systems

DIA Projection

<u>System</u>	<u>1968</u>	<u>1972</u>	<u>1976</u>	<u>1980</u>	<u>1985</u>
G-class SSB w/350-mile ballistic missile	2	3	5-7	7-9	10-12
H-class SSBN w/three 350-mile ballistic missiles			1	2	5-10
J-class SSG w/four 300- mile cruise missiles			1	3	6
E-class SSGN w/six or eight 450-mile cruise missiles					3-5
W-conversion SSG w/one to four 300-mile cruise missiles	1	4	7	7	7

SRI Median Projection

G-class SSB w/three 350-mile ballistic missiles	0-1	2	6	6	6
Follow-on diesel w/four 1,000-mile ballistic missiles				2	(converted as below)

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	<u>1968</u>	<u>1972</u>	<u>1976</u>	<u>1980</u>	<u>1985</u>
Follow-on diesel w/four 2,500-mile ballistic missiles					<u>6</u>
W or R conversion SSG w/two 300-mile cruise missiles		2	2	2	
J-class type SSG w/four 600-mile cruise missiles			1	3	6

Comment: Both studies state that the G-class ballistic missile submarine is likely to be the primary nuclear delivery system available to the Chinese for use against the continental US through most of the next ten years. We believe the number of G-class units projected by SRI is acceptable through 1980 as is the number projected by DIA through 1976. However, we doubt Peiping would continue production of a conventional submarine, by then twenty years off the design boards, much beyond that date and hence we do not accept DIA's projection for 1985.

We believe the G-class submarine has threat potential for Alaska, Hawaii, and, even more realistically, for US bases and allied nations in the western Pacific. We consider the G-class submarine at best a marginal threat to the US West Coast.

It is highly unlikely that an unrefueled G-class boat from a Chinese mainland base could reach the 350-mile launch area off the US West coast and return to China. The submarine could be refueled enroute for greater range and for on-station time off the continental US but this would substantially increase the chance of detection, which already is very considerable in view of

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[redacted] the distances involved. Admittedly one or two G-class submarines might sneak through for a surprise first strike against the West Coast but we believe it is much more likely that the Chinese will consider their G-class units as an interim and Asia-directed force from which they can develop operational techniques and capabilities while concentrating their limited research and development resources on follow-on ballistic missile submarines better able to perform in the environment of the 1980's.

At this point we depart sharply from the DIA projection which postulates all Chinese submarines through the next two decades as copies of present Soviet models. Twenty years from now these submarines will be obsolete and we do not believe the Chinese would be willing to accept a 1965 submarine force in 1985. We believe the number of submarine programs proposed by DIA is in excess of Chinese industrial and technological capabilities, assuming they also intend to allocate resources to other advanced weapons programs.

We would agree with SRI that the Chinese might produce a native design diesel-powered ballistic missile submarine within the next ten years. But this submarine would have to be very large to reach the US unrefueled and, with improved US detection capabilities in the Pacific against diesel submarines, would be of marginal usefulness as a long-range strategic weapon. We agree with DIA, however, to the extent that we feel the Chinese will eventually attempt to develop a nuclear-powered ballistic missile boat.

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If the Chinese received some nuclear submarine hull and propulsion design data from the Soviets before the split- [REDACTED] --then the Chinese could possibly produce their first SSBN unit between 1975 and 1978. On the other hand, if the Chinese received no help, we would not expect to see the first unit until about 1980. In either case, we doubt the Chinese would have more than 5 units in 1985.

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We agree with both studies that the Chinese may build diesel cruise-missile submarines, but primarily for defense against hostile naval forces in the Far East and not in the numbers or varieties proposed by DIA. We do not consider the diesel cruise missile submarine an integral part of the strategic threat to the continental US because of the general range limitations.

As for ballistic missiles to go with these various submarines, we agree with both DIA and SRI that the Chinese could have a 350-mile surface-launched ballistic missile developed by 1968 for the G-class submarine. If the Chinese go forward with their own ballistic missile submarine designs, we assume as a matter of course that they would develop an improved range and a submerged launch capability. They would presumably wish to equip any nuclear submarine with a submerged-launch missile of considerably longer range than 350 miles and probably would be able to develop one by the latter 1970's.

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## III-B

2. Surface-to-Surface Ballistic Missile SystemsDIA Projection

<u>System</u>	<u>1968</u>	<u>1972</u>	<u>1976</u>	<u>1980</u>	<u>1985</u>
MRBM	4-8	40-56	88-104	136-144	136-144
IRBM		20	55	55	55
ICBM (1st gen)			8	20	20
ICBM (2nd gen)				14	84

SRI Median Projection

MRBM or IRBM	80	280
ICBM (1st gen)	5	30
ICBM (2nd gen w/larger warhead)		10

Comment: We have estimated that a medium range ballistic missile similar to the Soviet SS-4 could become operational in China as early as 1967. We still feel this is possible but would now be more inclined to put IOC in 1968 or 1969. The DIA study anticipates deployment of 4-8 MRBMs by the end of 1968 and suggests that deployment will level off in 1980, when 140 are in the field. We believe that this is a reasonable projection. It is possible that this missile will have a range somewhat greater than the 1,000-mile range of the SS-4.

DIA suggests that China may attempt to develop an intermediate range ballistic missile with a range of about 2,000 miles and that this vehicle could become operational at the end of 1970. Deployment is projected to level off in 1975 with 55 weapons in the field. We have no good evidence of an IRBM development program in China and doubt that the Chinese will consider it worthwhile to develop such a weapon. Most

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of the potential Asiatic targets for Chinese missiles are within 1,500 miles of the Chinese mainland and could be reached either with an MRBM or with bombers and submarine-launched missiles.

The SRI study anticipates that China will develop either an MRBM or an IRBM. A deployed force of 80 is forecast for 1976 and a force of 280 in 1985. We doubt that the number of potential targets in Asia justifies the deployment of more than 150 weapons of these types.

DIA predicts initial ICBM deployment in China in 1975 and SRI puts ICBMs in the field the following year. We believe the timing of these forecasts is reasonable. It is possible that China already has begun an ICBM development program.

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We believe a first generation Chinese ICBM would be liquid fueled--probably storable--and that, by 1980, they could have a second generation weapon. We agree with DIA that, by 1985, they might have a total deployed ICBM force of 100 launchers. The DIA study raises the possibility that if China acquires a significant MRBM/IRBM capability it may settle for a token ICBM force augmented by a small number of long-range submarines. In view of the high developmental costs, a token ICBM effort would hardly seem worthwhile to us.

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## III-B

3. AircraftDIA Projection

<u>System</u>	<u>1965</u>	<u>1970</u>	<u>1976</u>	<u>1980</u>	<u>1985</u>
IL-28 (Beagle)	280	50			
TU-4 (Bull)	13				
TU-16 (Badger)	2	12-15	100	100	75
Supersonic-Dash Medium Bomber			2	100	220

SRI Median Projection

Medium Bomber		60		75
Heavy Bomber Converted from Civil Transport		10	20	20

Comment: With respect to the DIA estimate, we feel the Chinese-produced Badger probably would not enter service quite so early and would place its IOC at 1968 or 1969. DIA also is a bit more optimistic than we on the IOC for a supersonic dash medium bomber. It certainly is possible that a prototype native design aircraft with a Mach 1.5 dash capability could appear by 1976 but, here again, we would put the date a year or two later. We doubt that the aircraft would be operational in considerable numbers much before 1980, or that the Chinese would have as many as 100 in their inventory before 1985.

We find virtually no common ground with SRI on aircraft developments. We see no prospects for the Chinese to acquire the VC-10 or Boeing 707 mentioned by SRI as likely candidates for a conversion program beginning in the 1969-1970 period. Even assuming that the Chinese wanted these aircraft for conversion

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and were able to obtain a few from third countries-- with the attendant parts and maintenance problems-- their value as strategic bombers is highly questionable. For example, we do not agree with the SRI assumptions made in estimating fuel consumption and hence do not think the aircraft could have the 8,000 mile unrefueled or 10,400 mile refueled ranges postulated. Refueling also presupposes some of the aircraft are converted to tankers.

In short, we believe the threat to the continental US from Chinese strategic aircraft over the next twenty years will be non-existent.

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## III-B

4. Nuclear Weapons Production

The DIA and SRI studies are concerned primarily with delivery systems and give only passing attention to the production of nuclear materials. Both studies assume the availability of an adequate supply of fissionable materials to support a nuclear test program and to permit deployment of sizable numbers of weapons armed with nuclear warheads. Although China presently lacks facilities for large-scale production of uranium-235 and plutonium, our projection of output through 1985 indicates that adequate quantities of both would be available for the programs outlined in the studies.

We believe that the Chinese have the technical capability to develop nuclear warheads compatible with the delivery systems estimated in both the DIA and SRI studies. We also believe that time phasing of these warhead developments can meet the schedule of delivery systems.

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## III-C

COMMENTS ON POLITICAL AND MILITARY IMPLICATIONS  
OF NIKE-X DEPLOYMENT

In our opinion, the SRI study considerably overdraws the political and some of the military advantages that would result from the deployment of Nike-X defense against light attacks. In particular, we believe the SRI study makes too much of the reassuring effect such deployment would have on non-Communist Asian nations as they contemplate the Chinese nuclear threat. Any advantage accruing from an increase in the credibility of US nuclear guarantees, as argued by the study, would, in our view, be offset to a considerable degree by the upgrading of the Chinese threat in Asian eyes following US deployment of an "anti-Chinese" ballistic missile defense.

We believe that Nike-X deployment would have much less of a dampening effect on Nth countries nuclear proliferation than the SRI study asserts. Similarly we do not agree that a US Nike-X deployment would do much to "facilitate US-Soviet disarmament agreements by making it safer to tolerate Chinese (or other Nth countries) refusal to join such agreements," nor do we believe that Nike-X deployment would appreciably reduce the prestige value of nuclear weapons.

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Furthermore, we see less chance than does SRI that the Chinese would be discouraged from developing a strike capability against the US, although we agree that the Chinese might be constrained to slow their program while they attempted to develop more sophisticated systems. With respect to the Soviet Union, the SRI study states that a light Nike-X deployment would eliminate or markedly curtail damage from a "small demonstration attack"--a type of attack we believe quite unrealistic and unlikely.

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## III-D

COMMENTS ON INTELLIGENCE LEADTIME

SRI, urging an immediate decision to deploy Nike-X, discusses intelligence leadtime at some length. The study states that between now and 1975 we will have only two to three years' advance knowledge of Chinese weapons programs before these weapons are deployed. As it will take four years from the decision to deploy Nike-X until the system reaches an initial operating capability, the study argues that any delay in making that decision while awaiting more solid intelligence will create a gap between the existence of the threat and the defense against it.

This is a reasonable estimate on some systems but not on others.

For example, the lead unit in a new submarine building program might not be detected until it was launched. This was the case with the present G-class boat at Dairen. It usually takes from 24 to 30 months to build a new submarine and at least another year to complete fitting out, sea trials, and crew training before the unit can be considered operational. Hence,

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we have reasonable confidence that we could provide at least one and possibly two years' intelligence leadtime on the first unit of a new missile submarine class.

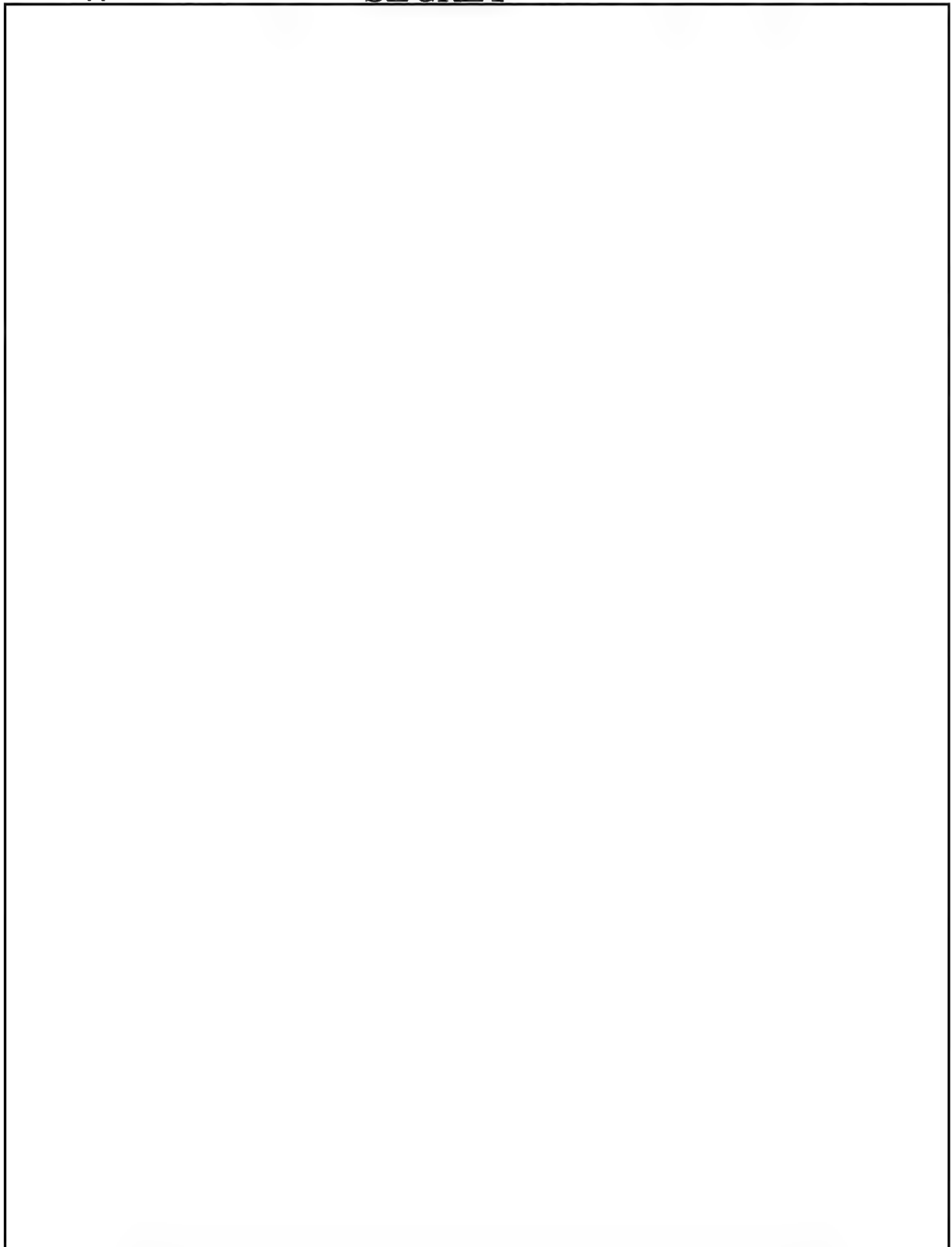
However, once a new submarine type has been identified, the percentages in favor of detecting other units in early stages of construction increase considerably to the point where leadtime may be as much as 20 to 30 months before IOC. The number of yards involved in such a building program also permits fairly good projections on the size of the force through periods of four to six years.

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Quite an active nuclear testing program would  
be required to provide nuclear weapons for the various

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delivery systems projected by DIA and SRI. If the Chinese continue to test above ground, such a program should give valuable clues as to the type of strike capability the Chinese are developing. Because the development of warheads is an important factor in determining production leadtime, it would also give us another tool for estimating the IOC of various delivery systems.

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IV-A

NIKE-X DEPLOYMENT STUDY

Document Summary

This study proposes a Nike-X deployment designed to counter a relatively light ballistic missile attack from any quarter but with special emphasis on the possibility that such an attack might be mounted by Communist China. The study was directed by the Secretary of Defense and prepared for him by the Stanford Research Institute under contract to the Department of the Army.

Perhaps the most significant single conclusion reached in the study is quoted below:

"Failure to maintain an IOC of 1 October 1970 will risk substantial casualties and damage to the West Coast of the United States from the early Communist Chinese threat."

To achieve this IOC, a go-ahead decision would have to be made by 1 January 1966.

The study estimates that this 1970 threat will consist of three submarine-launched ballistic missiles aboard the one Chinese G-class submarine now at Dairen. These missiles would have a 350-mile range.

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Beyond 1970, the study estimates a projected Chinese Communist nuclear threat through 1985. This projection is based on assumed political objectives and economic constraints through the next two decades. The Nike-X deployment recommendation is matched against what the study considers the maximum feasible strategic weapons program available to the Chinese.

Specifically, the study concludes that limited scientific, technical, and economic capabilities probably will force China to elect one of two military strategies during the period of the study. These strategies are:

- A. The "limited global strategy" stresses development of a strategic nuclear deterrent and theater nuclear force at the expense of conventional forces. This strategy is described as a "high threat" to the US.
- B. The "Asian emphasis strategy" has two variants:
  - The build-up of theater nuclear forces designed primarily for use in Asia, gradual modernization of at least part of the conventional force, and only a "median threat" directed at the US.

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--Build-up of conventional forces with only token strategic force development. This represents the "low threat" to the US.

The study concludes that the Chinese cannot afford the "high threat" option and that the "median threat" is the maximum program feasible for the Chinese. The study states that even the median threat cannot be achieved without excellent program management, high-quality decision making, and heavy allocation of scarce resources to the military.

In summary form, the estimated parameters of the Chinese median threat for the next two decades are:

<u>System</u>	<u>1968</u>	<u>1972</u>	<u>1976</u>	<u>1980</u>	<u>1985</u>
Submarines/launch tubes (G-class w/350-mile missile)	0-1/3	2/6	6/18	6/18	6/18
Submarines/launch tubes (Follow-on diesel sub w/1,000-mile missile)				2/8	
Submarine/launch tubes (Follow-on diesel sub converted to use 2,500- mile missile)					6/24
Cruise-missile submarine (Converted W- or R-class)		2/4	2/4	2/4	
Cruise-missile submarine (J-class type diesel)			1/4	3/12	6/24

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<u>Systems</u>	<u>1968</u>	<u>1972</u>	<u>1976</u>	<u>1980</u>	<u>1985</u>
Converted Commercial Aircraft Bombers			10	20	20
Medium Bombers			60		75
MR/IRBM			80		280
ICBM			5	30	60

The study hypothesizes that the first Chinese ICBM would become operational about 1972; however, the threat to the US through 1975 stems mostly from submarine-launched vehicles.

To counter the Chinese threat, the study recommends a two-phased Nike-X deployment to be completed by 1975. The cost of Nike-X deployment through these two phases would be \$9.41 billion. If a decision is made to expand the defensive system at a later date, two additional phases may be added at a cost of \$13.7 billion. Such a four-phase program would theoretically provide substantial defense against a sophisticated ICBM attack at a total cost of about \$23 billion. Additional funds would be necessary to provide for concurrent improvement in defense against cruise missiles, aircraft, and for improved submarine detection. Additional costs also would be incurred in building shelters for 62 million people.

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Phase I deployment would provide for 960 Nike-Zeus high altitude intercept missiles and 576 low altitude Sprint missiles. This would provide complete Zeus coverage of the continental US and Hawaii and Sprint coverage of 16 cities. This Phase I defense is considered adequate protection against a relatively light and unsophisticated ICBM attack.

Phase II deployment adds 216 more Zeus missiles and 512 more Sprints for a total of 1,176 Zeus and 1,088 Sprints. This defense--the number of cities defended by Sprint would be 25--provides a highly effective defense against a light attack of any kind or from any source.

If deployment is carried through Phases III and IV, a total of 51 cities would be defended by Sprints and the entire US plus Hawaii would have a substantial--but not complete--defense against a sophisticated ICBM attack.

The study estimates that without Nike-X deployment, the US could incur several million fatalities if attacked by the Chinese forces of 1976, but with deployment, casualties would be nominal. The Chinese threat of 1985 could bring 40 million deaths to an undefended America but Nike-X deployment through Phases IV could reduce losses to about 15 million.

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The study postulates that political advantages also would follow early deployment of Nike-X. Results expected by the study group are:

- A. The Chinese will be forced to modify, or possibly even abandon, their efforts to develop a nuclear deterrent against the United States.
- B. The credibility of the US nuclear guarantees to Asian nations will be increased, since the threat and consequences of a Chinese attack on the US would be reduced.
- C. The incentive of China's Asian neighbors and other countries to develop nuclear weapons would be reduced.
- D. The gradual deployment of Nike-X will have little perturbing effect on the US deterrent posture vis-a-vis the USSR. A massive and rapid deployment of a US ABM system would have a perturbing effect, however.

Intelligence leadtime is a crucial factor in making decisions on Nike-X deployment. The study states that between now and 1975 we will have only two to three years' advance knowledge of Chinese advanced weapons programs before these weapons are deployed. As

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it will take four years from the decision to deploy Nike-X until the system reaches an initial operational capability, the study argues that any delay in making that decision while awaiting more solid intelligence will create a gap between the existence of the threat and the defense against it. Beyond 1975, the study believes intelligence leadtime will more nearly equal the decision-to-deploy leadtime needed by the Nike-X program.

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IV-B  
DIA SPECIAL INTELLIGENCE SUPPLEMENT  
COMMUNIST CHINA NUCLEAR WEAPONS THREAT

Document Summary

This paper assesses the Communist Chinese nuclear threat through 1985. The paper was requested by the Secretary of Defense and prepared by DIA as a unilateral estimate.

In brief the DIA estimate concludes that Communist China will not constitute a serious nuclear threat over the next few years; but that sometime between 1970 and 1980 China could develop a significant program in nuclear weapons and associated delivery systems, and could represent a major threat to US bases in Asia and US Asiatic allies, as well as a minor threat to the continental US. Communist China could not constitute a serious nuclear threat to the US until 1980-1985. By that time the Chinese threat could comprise a number of means of delivery for several types of nuclear weapons.

The paper concludes that Communist China's primary national objectives are to: guarantee the security of its own territory; influence border countries; establish Communist China as a world power;

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eject the US from Asia; diminish US and Western influence throughout the world; and establish pro-Communist Chinese regimes throughout the world. China realizes that pursuit of these objectives may result in a major confrontation with the US and, consequently, is almost certainly determined to develop a nuclear strike capability against US allies and US territory. Development of a nuclear strike capability will be carried on even though it involves a disproportionately large share of China's research and development resources, and imposes a severe strain on China's economy.

The DIA paper estimates that the Chinese will be capable of producing more than enough fissionable material for weapons predicted to be produced during the period of the estimate. Before 1967-1968, the Chinese could develop a nuclear bomb that could be delivered by an IL-28 (Beagle) and by 1970 could possibly develop a nuclear bomb for delivery by a MIG-21. Although development of a thermonuclear weapon may require several years, fission weapons with yields up to about a megaton could be developed using large amounts of U-235 before 1970. Thermonuclear missile warheads should not be available before 1970, but can be reasonably expected by 1975. By 1985 yield/weight

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ratios of these warheads could match or exceed those presently attained by the Soviets or the US.

The DIA paper estimates that the Communist Chinese could have an SR/MRBM ready for deployment as early as 1967-1968, with four to eight launchers available by 1968, increasing to 136-144 launchers in 1980. Deployment of an IRBM (2,000 n.m.) could occur by 1971 with as many as 55 deployed by 1975. The first ICBM could possibly be produced by mid-1972, deployed by 1975, and by 1979 the Chinese could probably begin deploying a follow-on ICBM, with possibly 100 ICBM's deployed by 1985. The Chinese may also desire a tactical nuclear capability and may adapt either the Kennel cruise missile or the 350-mile nautical ballistic missile to this purpose.

The DIA paper estimates several types of submarine threats. The Chinese probably will construct additional G-class ballistic missile submarines, producing 10-12 by 1985. The Chinese could develop a 350-mile missile that could be launched from a submarine or a ground launcher by 1967 or 1968. These boats will give China a strategic capability throughout the Pacific. By 1978 the Chinese could build their first nuclear-powered H-class guided missile

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submarine and could build a nuclear-powered E-class cruise missile submarine by 1982. By 1985, the Chinese could have five to ten H- and three to five E-class submarines, all capable of striking either coast of the US. For tactical offense against US carrier task forces, the Chinese could begin converting W-class submarines to cruise missile units by 1968, with seven units converted by 1975, and could produce six J-class conventionally powered, cruise missile submarines by 1985. A number of guided missile patrol boats of the Osa and Komar classes could be equipped with nuclear-tipped missiles during the next five to ten years.

If the Chinese decide to pursue a bomber aircraft development program, the DIA paper estimates that the Chinese could produce a medium bomber similar to the TU-16 (Badger) by 1967-1968 and deploy 12 to 15 bombers by mid-1970. The Chinese probably could not build a native-designed, militarily significant bomber (probably similar to the Soviet Blinder) until 1975.

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Tabular Summary of the  
COMMUNIST CHINESE NUCLEAR THREAT OVER THE NEXT 20 YEARS  
as Estimated by DIA

	Y E A R	1965	1970	1975	1980	1985
<b>MISSILES (deployed):</b>						
MRBM			20-32	76-92	136-144	136-144
IRBM				55	55	55
ICBM (1st generation)				4	20	20
ICBM (2nd generation)					14	84
<b>NAVAL FORCES:</b>						
H-class SSBN				1	2	5-10
G-class SSB	1		2	4-6	7-9	10-12
J-class SSG					3	6
E-class SSGN						3-5
W-(converted) SSG			2	7	7	7
Osa-Komar (PTFG-PTG)	2		18	38	63	88
<b>AIRCRAFT:</b>						
MIG-21 (type)	35		360	1,260		
MIG-21 follow-on					100	300
IL-28 (BEAGLE)	280		50			
TU-4 (BULL)	13					
TU-16 (BADGER)	2		12-15	100	100	75
BLINDER (type)					100	220

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